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Abstract

BEHAVIOUR OF FUEL UNDER IRRADIATION

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In the paper there are set forth results of theoretical and experimental investigations of some processes arising in fissionable materials. In particular, the theoretical consideration is given of processes being elementary to more complicated process of gas swelling of fuel. Some of these processes are: pore nucleation, pore coagulation, large pore growth owing to small pore dissolving (the coalescence of gas pores). Gas swelling kinetics is studied, considering these elementary processes contribution. There are considered also some features of gas swelling kinetics which may arise in some dispersion systems . The formulas are set forward of engineering swelling calculations for some compositions.

In the paper there are also given results of experimental investigations of stability for some fissionable materials and their consideration basing on modern consumptions.

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